

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/IB 02/04162

## A. CLASSIFICATION OF SUBJECT MATTER

IPC7: H04R 1/28 // G10K 11/02

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7: G10K, H04R

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-INTERNAL

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5092424 A (W.P. SCHREIBER ET AL), 3 March 1992 (03.03.92), figures 8,19,40B and text --	1-9
X	US 6389146 B1 (J.J. CROFT, III), 14 May 2002 (14.05.02), figure 4 and text --	1-9
X	US 2002061114 A1 (J.J. CROFT, III), 23 May 2002 (23.05.02), figure 4 and text --	1-9
A	EP 0336303 A2 (YAMAHA CORPORATION), 11 October 1989 (11.10.89), connecting ducts 8 --	7,8

☒ Further documents are listed in the continuation of Box C.☒ See patent family annex.

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&amp;" document member of the same patent family

Date of the actual completion of the international search

21 May 2003

Date of mailing of the international search report

23 -05- 2003

Name and mailing address of the ISA/

Swedish Patent Office

Box 5055, S-102 42 STOCKHOLM

Facsimile No. +46 8 666 02 86

Authorized officer

Leif Vingård / MRo

Telephone No. +46 8 782 25 00